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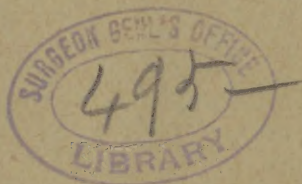
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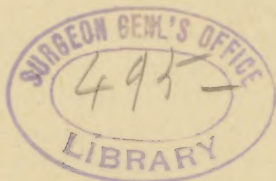
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A CONTRIBUTION ON
THE OCCURRENCE OF MENTAL DISTURBANCES
FOLLOWING ACUTE DISEASES IN CHILDHOOD.*

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THE occurrence of mental derangements in childhood has been known for a long time. In the records of the Braunschweig Insane Asylum of the year 1750 a case is mentioned of a girl, eleven years of age, who had been sent there for the treatment of melancholy. Greding's book, published in the year 1790, contains a communication about a nine months-old baby, the son of an idiotic mother, which suffered with maniacal attacks, and died of marasmus and suffocation at the cutting of its first teeth. Indeed, more than fourteen hundred years ago, Cælius Aurelianus, in his work *De morbis acutis et chronicis*, remarks on the rare occurrence of mania among children in the following: "Generatur autem mania frequentius in juvenibus ac mediis ætatibus, difficile in senibus atque difficilius in pueris, vel

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mulieribus." But it was only during the second half of the present century that attention was called to and a thorough study of the psychoses among children made.

The first noteworthy treatise originated from an English author, Ch. West, which was followed in Germany by a monograph on this subject written by Berkhan in the year 1865. Somewhat earlier there appeared the first essay on psychoses in connection with acute diseases by Boileau. Besides some few less important articles, there appeared in the year 1865 some very valuable contributions on this subject by H. Weber and Muguier. As some few communications from Thore and Griesinger prove, the occasional occurrence of mental disturbances in connection with somatic diseases was not unknown to the older physicians; even Sydenham, in the year 1676, mentions that intermittents may be followed by alienations.

The statistics on the frequency of mental derangements in children vary very greatly among the different authors on account of their different ideas as to the limits of childhood. However this may be, it seems to be certain that alienations in the first ten years of life, aside from idiotism, are very rare. Out of ten thousand inhabitants, Emminghaus found in Germany, between the first and fifth years, 0.18 per cent. insane; between the sixth and tenth years, 0.69 per cent.; and between the eleventh and fifteenth years, 1.46 insane; while Deboutteville, in France, found among the insane admitted to the asylum in Saint-Yeu from 1827 to 1834, 0.9 per cent. between the fifth and ninth years, 3.5 per cent. between the tenth and fourteenth years, and 20 per cent. between the fifteenth and twentieth years. Turnham found but eight children less than ten years of age among twenty-one thousand three hundred and thirty-three insane; idiots, who are far more frequent in number, not being included. The most common mental de-

rangement in childhood is idiocy, be it congenital, depending upon insufficient development of the brain, or acquired as the result of some other previous cerebral trouble. Next in frequency is the maniacal exaltation and mania, while melancholic depression is but rarely met with and only in late childhood.

But I think we may assume, with all probability, that insanity in childhood occurs more frequently than is evident from the statistics given. As no psychosis in childhood shows the entire complex of symptoms as in adults, it is readily understood that the symptoms of a mentally deranged child may often be taken to be bad behavior, and only the result—the idiotism—will be recognized.

Besides heredity, especially from the maternal side, the ætiological factors in the production of mental disturbances in children are injuries of the head, either during parturition or later; acute cerebral trouble and abnormal development of the brain; insolation; fright; masturbation; and infectious diseases. Of the latter, I mention, according to their frequency, typhoid, pneumonia, acute articular rheumatism, measles, scarlatina, and angina faucium. During the last three years I have had the opportunity of observing mental derangements following infectious diseases in three children. On account of their infrequent occurrence, I take the liberty of reporting them so far as my memoranda permit. In all three cases the alienation manifested itself after the total disappearance of the fever—in one child in the defervescent stage of scarlatina, in the other during convalescence after typhoid and diphtheria. In the literature at my disposal I was able to find but one case following an inflammatory affection of the throat. This is described in H. Weber's classical essay, and published in the *Medico-chirurgical Transactions* of 1865. On account

of the similarity in the ætiological factors, permit me to report briefly Weber's case.

A man, twenty-five years of age, suddenly exhibited, after a severe inflammatory affection of the throat, symptoms of mental derangement. Laboring under the delusion that his business was being ruined, he tried to kill his wife, child, and himself in order to be saved from coming disaster; but, being prevented from carrying out his intentions, he got well in less than two days after the administration of large doses of morphine and a moderate quantity of wine. He remained very low-spirited during the next fortnight, and only then did his previous cheerful disposition return. The delirium was accompanied by symptoms of collapse.

The first case I observed was that of Franz Z., a boy ten years of age, of healthy parents; a half-brother of his father died of consumption; several of his mother's brothers and sisters (eight) died of infantile diseases; one living sister has epilepsy. The mother of the boy had seven children. The first was a still-birth, the second died with pneumonia, and a third during dentition. Of the four remaining living children, a younger brother, suffering with frequent attacks of bronchitis, and a baby, ten months old, with otitis media and retropharyngeal abscess, have been under my care for treatment. Franz was born at full term during a normal labor, and early developed symptoms of rhachitis, the first teeth appearing at the end of his first year, and at the termination of the second was hardly able to walk. Off and on he suffered with convulsions; he had measles, scarlatina, and frequently bronchitis; also swelling of the glands of the neck. From his fifth year he always was healthy, went to school, and was an industrious and intelligent pupil.

In the latter part of February, 1889, he fell sick with high fever. The temperature rose to 104° F., with a rapid pulse. He complained of severe headache and difficulty in deglutition. On inspection, the tongue appeared covered with a thick, yellowish-white coating. There was intense hyperæmia and swelling of the velum and the posterior wall of the pharynx,

while on both enlarged tonsils were small circumscribed diphtheritic patches. There was also considerable swelling of the submaxillary glands. The viscera of the thorax and abdomen were found to be normal, and the constitutional symptoms in accordance with the local affection.

To reduce the temperature I ordered antipyrine in doses of 0·3, and for the throat affection hourly cold compresses; every two hours 0·3 tincture of the chloride of iron dissolved in glycerin and water, besides frequent administration of milk, whisky, and beef tea.

The fever kept on for the next three days, but the symptoms decreased in severity, and on the sixth day after the onset the local affection had disappeared with the exception of a slight redness of the fauces. The patient felt considerably better; his appetite returned; he passed large quantities of urine, which contained neither albumin nor sugar, but, although the temperature was normal, the pulse was weak and frequent; bed rest and light roborant diet was therefore ordered. In the course of a few days the patient became unusually restless; he could not sleep at night, and lost his appetite. Contrary to his habit, he was very talkative, and often gave impudent answers. After the administration of one gramme of bromide of potassium in the evening he slept somewhat better; but gradually the restlessness in the motor as well as in the psychic sphere increased considerably. Being now in very good humor and in an incessant talkative and playing mood, he quickly, after a slight cause, became excited to excessive anger, with hostile intentions toward his family. Sometimes, without any reason at all, he was furious, full of mischief and brutality. In one of his violent fits, in an unguarded moment, he tried, after having broken the window glass, to throw his little favorite sister into the street. At another time he beat, bit, and choked his mother, and tore her dresses off her body until he fell back exhausted. At times these raving attacks were preceded by stupor with staring glance and rigid position of the body, his face as well as his hands and feet being covered with perspiration, while the pulse was very frequent and irregular. He had lost his appetite entirely, and only with a great deal of trouble

could he be induced to partake of some food. He rested very badly in spite of administration of sulphate of morphine. My proposition to send the boy to an asylum was not accepted by the parents, especially when I told them that the cessation of the mania in a few weeks was to be expected. In his madness he tore and broke everything he could lay hands on, with the exception of the many portraits of saints with which he was surrounded by his bigoted mother; with the fragments and remains he played for hours. In the presence of strangers he often would control himself, and was then vivacious and animated, sometimes using rude and indecent language. Often he mistook persons whom he knew before very well. Very rarely he had hallucinations—oftener of sight than of hearing; they were mostly of a fretful nature, contrary to his usual gay state of mind. This condition remained nearly unchanged until the end of April, 1889. From this time his motor and psychical restlessness decreased and slow but steady improvement set in; his raving attacks occurred less frequently; he became quieter and in his behavior more modest. His appetite increased, and he passed comfortable nights, yet he was unable to recollect many words. He also had totally forgotten to read and to write. At the end of May he was sufficiently improved to leave for the country, accompanied by his mother, and returned perfectly restored from there in the beginning of July. He remembered the past very well and felt ashamed if anybody referred to it. He was able to read and write again. Since then he always has been well, with the exception of an attack of angina faucium, from which he recovered in a few days without experiencing any disagreeable consequences.

The second observation was made in Lizzie S., a girl twelve years and a half old, yet of infantile habitus. She comes from a healthy family and suffered from but few diseases of childhood. She was, however, according to the report of her mother, always a pale and puny child. In August, 1889, she was taken ill with typhus abdominalis; fever, roseola, enlargement of the spleen, and disturbance of the alimentary canal were present, but the course of the disease was rather a mild one. There were no hæmorrhages of the intestines and no de-

lirium febrile. About two weeks after the beginning of convalescence the usually vivacious girl became depressed, she lost her appetite, and slept badly. The urine, which was passed in copious quantities, contained neither albumin nor sugar. She would often cry for a long time without any cause whatsoever, and finally explained that she was annoyed by terrible thoughts which she could not abandon. She felt impelled to kill her mother, but did not like to do so. The separation of the girl from her mother, who was afraid for her own life, was impossible on account of various reasons. Iron and roborant diet were ordered, and in the evening small doses of opium to promote sleep. In the course of the next few days she was still repeatedly troubled with imperative conceptions and melancholic depression, and only after a lapse of a few weeks fully regained her normal state of mind.

The third case observed was a boy, five years old, very well developed for his age. He came from very healthy parents and was himself never ill until one year ago; in the last year he suffered from measles and frequent attacks of angina tonsillaris, which left him anæmic and badly nourished. Last January he had scarlatina of a very mild type; the diagnosis, however, could be made with certainty, especially as in the same house only a few days before a child died of the same disease, the parents of which frequently communicated with the family of my patient. Fever and exanthema disappeared in due time; the urine was perfectly normal and there was no symptom of meningeal trouble; suddenly, after having been fretful and peevish some time before, his restlessness increased considerably; he did not recognize and repulsed his mother, to whom he had always been exceedingly attached. Laboring under the delusion that the house was on fire, he made efforts in his greatest terror to leave his bed and run into the street; he was very pale and his face was covered with profuse perspiration; his eyes were staring, the pulse very frequent and irregular; whisky and pulvis Doveri were ordered, but, notwithstanding, he passed a restless night; next day the little patient had a similar but rather milder attack of excitement with hallucinations; the treatment was the same as on the previous occasion. Regard-

ing the character of the hallucinations, it is of interest to note that there was really fire in the house a few months before. At the time the boy was said to have been in great fear. The duration of the mental disturbance in this case was forty-eight hours.

The alienations described have, in spite of their different character, that in common, that they occurred in children descended from healthy parents; that they followed closely various infectious diseases, and appeared some time after the complete decline of the fever. Especially important is the absence of meningeal symptoms and kidney affection. The character of the mental disturbance varies considerably: in the third case manifesting itself by rapidly vanishing delirium with hallucinations of sight; in the two first cases approaching in character psychoses of spontaneous origin; in the second case the melancholic depression, so rarely observed in childhood; while in the first case a slight diphtheritic attack was followed by an acute mania of three months' duration. In all patients the onset of the trouble was accompanied by symptoms of great debility, even of collapse.

The described mental derangements belong to the category of psychoses which H. Weber classifies as "acute insanity during the decline of acute diseases"; Kraepelin as asthenic psychoses; while Traube calls them "Inanition-delirien."

Already early the attention was called by Thore and other authors to the fact that psychoses following acute diseases are of two classes: the first is met with during the development and the duration of the acute process itself, while the second class is found only during convalescence, or at least during an afebrile intermission of the disease. The ætiology, as well as the course and the issue in these two groups—the febrile and asthenic deliria—differ considerably.

Kraepelin points out that in the pathogeny of the febrile deliria the producing cause of the disease prevails considerably over the predisposition of the individual; the causes of the disease, though, are dependent upon somatic disturbances (high temperature, increased metabolism, etc.). Hence the monotony of the febrile deliria, the short course, and the nearly always favorable issue with the disappearance of the aetiological cause; on the other hand, the predisposition of the individual forms, the most important factor in the development of the asthenic form. The lowered state of the system, depressed by the preceding fever and infection, exhibits itself more when the circulation is retarded during the decline of the fever; and the brain, which may have suffered in its vitality by the preceding rise of temperature, is the first organ that reacts on the inadequate supply of blood; besides, there may be an influence of the infectious elements (in the first case of the diphtheritic bacilli) upon the central nervous system itself, either directly by affecting the ganglionic cells, or indirectly through a change of the blood by the micro-organisms. In this deranged state of equilibrium of the system even slight irritating influences, such as are afforded by the events of daily life and which are frequently overlooked, may lead to the development of mental disturbances. In their course the asthenic psychoses resemble the mental derangements of spontaneous origin, and they usually terminate in full recovery; with the progressing convalescence and better nutrition of the brain its morbid changes disappear. II. Weber thus thinks the prognosis favorable: "Die Störung verschwand in seinen Fällen nach einigen Tagen, ohne andere Spuren zu hinterlassen, als die eines sehr lebhaften Traumes"; but he admits that in some cases the trouble may become a permanent one.

Kraepelin, whose explanation of the pathogenesis of the

asthenic psychoses I have accepted, found, in four hundred cases of febrile deliria collected from the literature, eighty-seven per cent. of all cases cured in four weeks; while of three hundred cases of asthenic psychoses, only fifty-nine per cent. recovered in the same time. The termination of the disease was in the first group sixty-three per cent. recovery and thirty-seven per cent. fatal, while in the second group eighty-two per cent. recovered, 6·9 per cent. died, and in 10·6 per cent. the mental disturbance continued chronic.

Delasiauve tells, from his great experience, that a number of individuals who have suffered and recovered from mania in their childhood were, as adults, again admitted to the asylum—a fact which has, *quoad prognosis*, to be taken in consideration. Occasionally the disease may terminate in idiocy.

As a matter of prophylaxis, children after acute diseases, especially when in an anæmic and poor condition, ought not to be allowed to leave the bed too early, and the action of the heart should be carefully controlled. Threatening spells of weakness ought to be prevented by administration of good nourishment and stimulants. In occurrence of deliria strict control of the patient becomes necessary; bed rest and a generous administration of alcoholics and heart stimulants. Against the irritable state of the brain, frequent dosing of sedatives is often repeated and, if necessary, larger doses.

Literature.

1. Claude-Stephen Le Paulmier. *Des affections mentales chez les enfants et en particulier de la manie*. Paris, 1856.
2. Berkhan. *Irrescin bei Kindern*. Brunswick, 1863.
3. H. Weber. *Medico-chirurg. Transactions*, vol. xlviii.
4. Kraepelin. *Archiv für Psychiatrie*, Bd. xi, xii.
5. Emminghaus. *Die psychischen Störungen des Kindesalters*, 1887.

